

**What is Claimed is:**

1. A pure homogeneous population of mammalian astrocyte restricted precursor cells, said population of mammalian astrocyte restricted precursor cells being CD44 immunoreactive and generating astrocytes but not oligodendrocytes.

2. A method for isolating the pure homogeneous population of mammalian astrocyte-restricted precursor cells of claim 1 comprising isolating from a source of neural tissue or cells a population of cells exhibiting CD44 immunoreactivity.

3. A pharmaceutical composition comprising the pure homogeneous population of astrocyte restricted precursor cells of claim 1 and a pharmaceutically acceptable carrier.

4. The pharmaceutical composition of claim 3 wherein the pharmaceutically acceptable carrier is an implant seeded or coated with the astrocyte restricted precursor cells.

5. A method for treating damaged neural cells comprising administering to the damaged neural cells the pharmaceutical composition of claim 3.

6. The method of claim 5 wherein the pharmaceutical composition is administered to the damaged neural cells by direct injection to the damaged neural cells.

7. The method of claim 5 wherein the pharmaceutical composition comprises an implant seeded or coated with the astrocyte restricted precursor cells.

8. The method of claim 7 wherein the pharmaceutical

composition is implanted at or near a site of damaged neural cells.

9. The method of claim 5 wherein administering the pharmaceutical composition to the damaged neural cells  
5 enhances myelination of the damaged neural cells.

10. The method of claim 5 wherein administering the pharmaceutical composition to the damaged neural cells reduces scar formation in the damaged neural cells.